

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Currently amended) A method for forming metal deposits on a substrate according to claim 1 wherein the reduction process in step c) comprises comprising:

- a) depositing a photosensitive organometallic compound onto a substrate;
- b) irradiating the photosensitive organometallic compound with UV radiation;
- c) reducing the irradiated photosensitive organometallic compound to form metal deposits adhered to the substrate in a process which comprises:
 - 1) a first heating and cooling stage;
 - 2) a second heating and cooling stage in an oxidising atmosphere;
 - 3) flowing an inert gas over the substrate; and
 - 4) a third heating and cooling stage wherein a reducing gas flows over the substrate to form metal deposits; and
- d) removing any degraded photosensitive organometallic compound residue and unaffected photosensitive organometallic compound from said substrate.

3-4 (Canceled)

5. (Previously presented) A method for forming metal deposits on a substrate according to claim 2 wherein the first heating and cooling stage is in an inert atmosphere such as a noble gas.

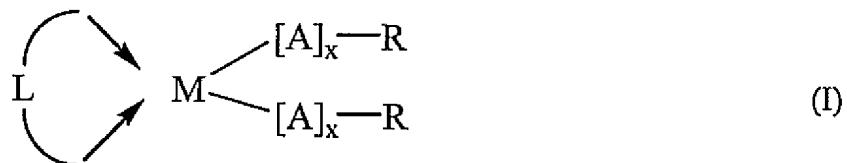
6. (Previously presented) A method of forming metal deposits on a substrate according to claim 2 wherein the oxidizing atmosphere comprises a dioxygen containing atmosphere such as air.

7. (Previously presented) A method of forming metal deposits on a substrate according to claim 2 wherein the reducing gas in the third heating and cooling stage comprises at least dihydrogen.

8-41 (Canceled)

42. (Previously presented) A method for forming metal deposits on a substrate according to claim 5 wherein the noble gas is dinitrogen.

43. (New) A method for forming metal deposits on a substrate comprising:
a) depositing a photosensitive organometallic compound corresponding to formula (I) as described below



wherein:

M is a member of the group consisting of platinum, palladium, copper, rhodium, tungsten, iridium, silver, gold and tantalum;

A is any of oxygen, sulphur, an amide grouping, an amine grouping or an ester grouping;

x is 0 or 1;

R is a fluoroorgano group; and

L is a bidentate ligand;

- b) irradiating the photosensitive organometallic compound with UV radiation;
- c) reducing the irradiated photosensitive organometallic compound to form metal deposits adhered to the substrate; and
- d) removing any degraded photosensitive organometallic compound residue and unaffected photosensitive organometallic compound from said substrate.

44. (New) A method for forming metal deposits on a substrate comprising:

- a) depositing a photosensitive organometallic compound selected from the group consisting of: bis-(perfluoropropyl)-1,5-cyclooctadiene platinum (II); bis-(perfluoropropyl)-1-methyl-1,5-cyclooctadiene platinum (II); and bis-(perfluoropropyl)-1-fluoromethyl-1,5-cyclooctadiene platinum (II) onto a substrate;
- b) irradiating the photosensitive organometallic compound with UV radiation;
- c) reducing the irradiated photosensitive organometallic compound to form metal deposits adhered to the substrate; and
- d) removing any degraded photosensitive organometallic compound residue and unaffected photosensitive organometallic compound from said substrate.

45. (New) A method for forming metal deposits on a substrate comprising:

- a) depositing a photosensitive organometallic compound onto a substrate;
- b) irradiating the photosensitive organometallic compound with UV radiation;
- c) reducing the irradiated photosensitive organometallic compound to form metal deposits adhered to the substrate by a process comprising:
 - (1) heating the coated substrate from about 25°C to about 120°C at a ramp rate of about 2°C per minute; maintaining the temperature at about 80°C for about 60 minutes; and then cooling the substrate from about 80°C to about 25°C at a ramp rate of about 10°C per minute; wherein N₂ is flowed over the coated substrate at a rate of about 50ml per minute;
 - (2) heating the substrate from about 25°C to about 250°C at a ramp rate of about 5°C per minute; maintaining the temperature at about 250°C for about 60 minutes; and then cooling the substrate from about 250°C to about 25°C at a ramp rate of about 5°C per minute; wherein the coated substrate is exposed to air;
 - (3) flowing N₂ at about 25°C over the coated substrate for about 10 minutes; and
 - (4) heating the coated substrate from about 25°C to 25 about 350°C for about 60 minutes; and then cooling the substrate from about 350°C to about 25°C at a rate of about 20°C per minute; wherein a mixture of about 5% H₂ and 95% N₂ is flowed over the coated substrate at a rate of about 150ml per minute; and

- d) removing any degraded photosensitive organometallic compound residue and unaffected photosensitive organometallic compound from said substrate.

46. (New) A method for forming metal deposits on a substrate comprising:

- a) depositing a photosensitive organometallic compound onto a substrate;
- b) irradiating the photosensitive organometallic compound with UV radiation;
- c) reducing the irradiated photosensitive organometallic compound to form metal deposits adhered to the substrate by a process comprising:
 - 1) heating the coated substrate from about 25°C to about 120°C at a ramp rate of about 2°C per minute; maintaining the temperature at about 80°C for about 60 minutes; and then cooling the substrate from about 80°C to about 25°C at a ramp rate of about 10°C per minute; wherein N₂ is flowed over the coated substrate at a rate of about 50ml per minute;
 - 2) heating of the substrate from about 25°C to about 350°C at a ramp rate of about 20°C per minute; maintaining the temperature at about 350°C for about 60 minutes; and then cooling the substrate from about 350°C to about 25°C at a ramp rate of about 20°C per minute; wherein the coated substrate is exposed to air;
 - 3) flowing N₂ at about 25°C over the coated substrate for about 10 minutes; and
 - 4) heating the coated substrate from about 25°C to about 350°C at a ramp rate of about 20°C per minute; maintaining the temperature at about 350°C for about 60 minutes; and then cooling the substrate from about 350°C to

about 25°C at a rate of about 20°C per minute; wherein a mixture of about 5% H₂ and 95% N₂ is flowed over the coated substrate at a rate of about 150ml per minute; and

- d) removing any degraded photosensitive organometallic compound residue and unaffected photosensitive organometallic compound from said substrate.